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Perinatal care organisation and maternal outcomes in Latvia

Implications for small health systems

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Fewer births are spread across a wide service network

Demographic change is reshaping the demand for maternity care. Several regional units now manage only a small number of births per year

1.845M

Population
January 2026

11,931

Live births
in 2025

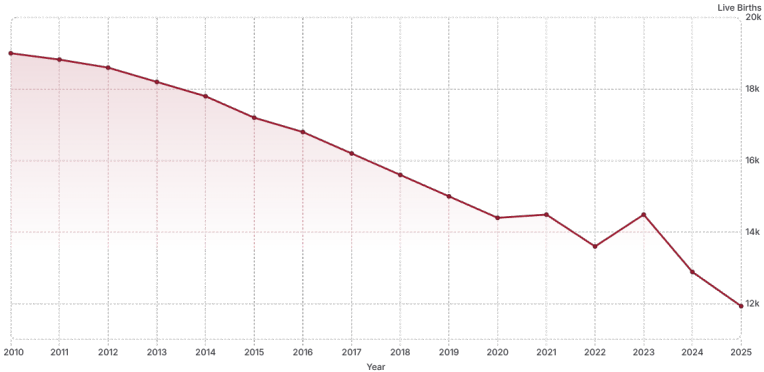
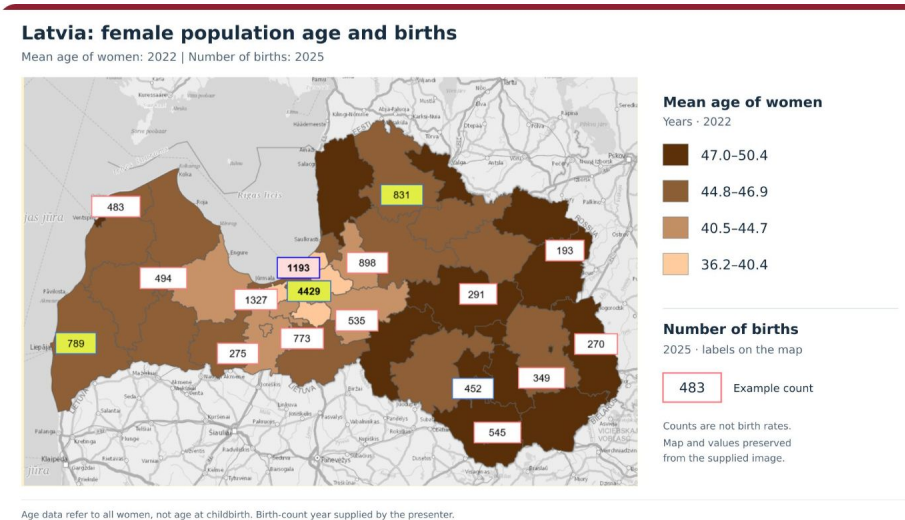
−17.7%

Birth decline
2023–2025

60%

Births at capital Riga and its suburbs
share of total

Annual live births in Latvia, 2010–2025



Central Statistical Bureau of Latvia. Annual demographic statistics for 2025; population at 1 January 2026. Published 2 June 2026.

 Fewer births reduce clinical exposure, while geography still demands reliable emergency care and transfer pathways.

Many maternity units now operate at low annual volume

NETWORK STRUCTURE, 2025

17

Hospital maternity units

Active in Latvia in 2025

9

Units below 500 births

More than half of all units

Low volume does not prove poor care; it reduces routine team exposure to rare, time-critical events.



A unit may remain geographically important — its role must match its staffing, emergency capability, transfer time, and ability to maintain competence.

Source: SPKC maternity - unit data, 2025; authors' analysis.

Access and capability must be assessed together

Geographic access

- Distance and travel time to the nearest unit
- Winter and rural transport conditions
- Continuity of care for low-risk women

CLINICAL CAPABILITY

- Experienced team available at all times
- Immediate surgery, anaesthesia, transfusion, and neonatal stabilisation
- Rapid consultation, escalation, and transfer

Regional unit — when it works

A regional unit can provide excellent low-risk care when risk selection works and escalation is reliable.

Proximity without capability

A nearby unit without dependable emergency resources does not guarantee safe access.

The policy question

Which women should each unit care for, what minimum capability must it maintain, and how does the network respond when risk changes?

Evidence note: Hospital - volume studies show associations with maternal and perinatal outcomes, but thresholds vary by setting and do not replace assessment of case mix, staffing, capability, and transfer systems.

High-risk care already concentrates in larger centres

EXISTING REGIONALISATION

- Latvia already has **functional regionalisation** — this is not a blank-slate reform
- Very preterm and complex pregnancies largely move to larger perinatal centres
- The Riga statistical region combines the highest birth volume with generally lower and more stable perinatal mortality over time
- Regional differences persist, but annual rates fluctuate when denominators are small — single-year comparisons are unreliable

❏ The long-term pattern supports the logic of regionalisation; it does not prove a causal effect of volume alone.

Interpreting outcomes requires:

1 Volume

Absolute number of births and denominators for rate calculation

2 Case mix

Gestational age distribution and complexity of referrals received

3 Referral function

Whether the unit sends or receives high -risk cases — not raw rates alone

Source: SPKC data, 2000 –2024; Miskova et al., 2026.

Maternal safety data remain the weakest part of the system

Routine data show **wide variation in reported pathological blood loss** between hospitals. Some units report very low haemorrhage rates despite recording hysterectomies — an internally inconsistent pattern.

Possible explanations

- Different measurement and coding practices for blood loss
- Incomplete ascertainment or under-reporting
- Different case mix or transfer patterns

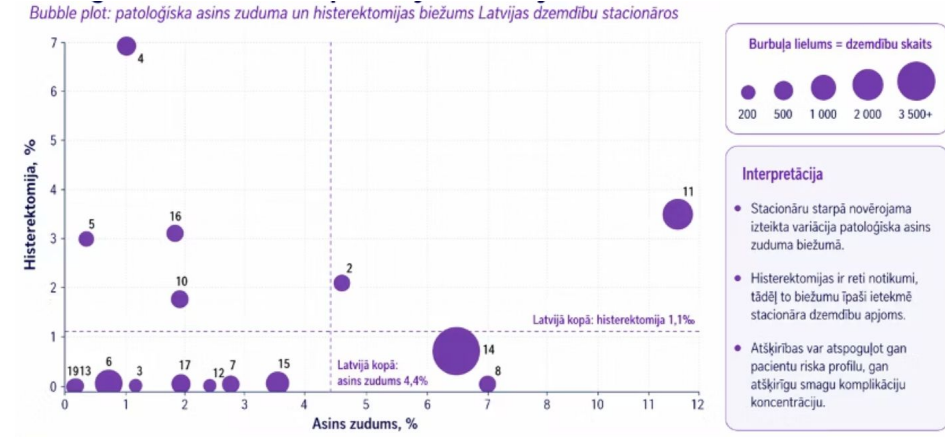
⚠ Variation is a **signal for audit**, not a hospital ranking.

More objective indicators needed

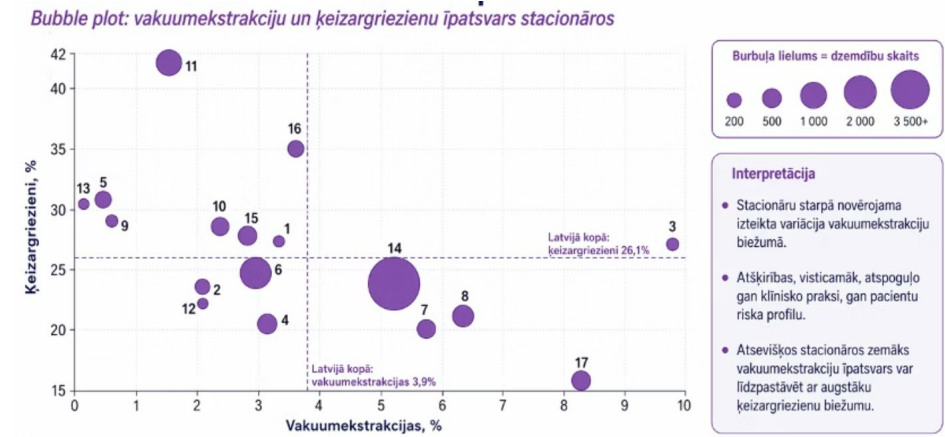
- Massive transfusion and invasive haemorrhage control
- Hysterectomy and critical care admission
- Emergency transfer and maternal near-miss

Latvia does not yet have complete national prospective severe maternal morbidity surveillance.

Source: SPKC hospital data, 2025; authors' analysis.



X ass – patoloģiska asins zuduma īpatsvars; Y ass – histerektomiju biežums uz 1000 dzemdībām; burbuļa lielums – dzemdību skaits; pārtrauktās līnijas – Latvijas kopējie rādītāji.



X ass – vakuumeļstrakciju īpatsvars; Y ass – ķeizargriezienu īpatsvars; burbuļa lielums – dzemdību skaits; pārtrauktās līnijas – Latvijas kopējie rādītāji.

A proposed three-level, risk-appropriate network

ONE NATIONAL NETWORK — PROPOSED MODEL

Level I — Low-risk birth care

Suggested minimum: 500 births/year

- Physiological birth
- Initial emergency stabilisation
- Neonatal resuscitation
- Rapid transfer pathway

Level II — Regional perinatal care

Suggested minimum: 1,000 births/year

- Selected moderate-risk care
- Extended obstetric emergency response
- Transfusion and short-term critical observation
- Neonatal care from 32 weeks

Level III — Tertiary care

Two national tertiary centres

- Complex maternal disease
- Birth before 32 weeks
- Full maternal critical care
- Highest-level neonatal intensive care

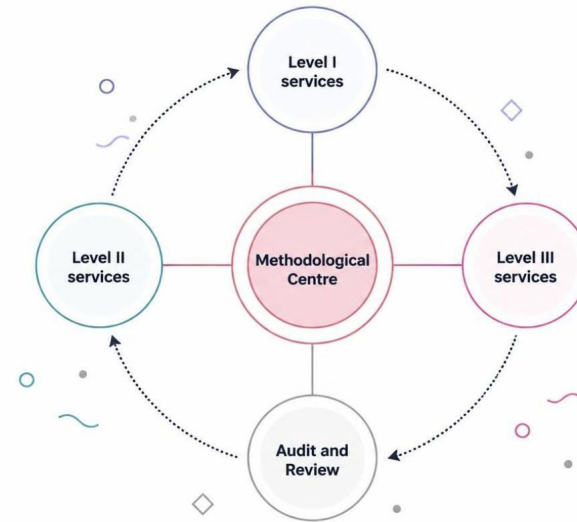
*Volume thresholds are **policy proposals** derived from literature, national data, and expert consensus — not absolute quality cut-offs.*

Functions define the level; direct capability and travel-time assessment remains essential. Source: Miskova et al., proposed Latvian model, 2026; national expert survey, 12 respondents.

One methodological centre should govern the network

NATIONAL RESPONSIBILITIES

- Define risk criteria and referral pathways
Standardised protocols for all providers across all three levels
- Coordinate maternal and neonatal transport
Network-wide transfer coordination and capacity management
- Set quality indicators and validate data
Comparable metrics; audit of hospital-reported figures
- Review deaths, severe morbidity, and transfers
Maternal deaths, maternal near-miss, emergency transfers, perinatal deaths
- Organise simulation and competency maintenance
Structured feedback across institutions; skills maintenance in low-volume units



- 📄 Latvia already has regulations, clinical pathways, and quality indicators — the deficit is **fragmented implementation and limited national oversight** .
Prospective surveillance of severe maternal morbidity would connect national work directly with **INOSS methods and multinational learning** .

Implications for small health systems

Declining birth volume

Makes distributed services harder to sustain safely — fixed emergency costs spread across fewer births

Regionalisation

Should match patient risk with verified capability while preserving reasonable geographic access

Governance and data

Comparable maternal morbidity data matter as much as the physical location of services

Surveillance

Mortality alone is too rare to monitor safety in small systems — prospective severe maternal morbidity surveillance is essential

Methodological centre

Connects risk-appropriate care, coordinated transport, validated data, and feedback into one system

The right woman, in the right place, with
a prepared team and no delay.
